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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/156,804	09/17/1998	PATRICK KALTENBACH	10980096-1	1533
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22878 7590 04/18/2003

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EXAMINER

BEX, PATRICIA K

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 04/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/156,804

Applicant(s)

KALTENBACH ET AL.

Examiner

P. Kathryn Bex

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-12, 25, 26, 28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 25, 28 and 30 is/are rejected.
- 7) ☒ Claim(s) 2, 4-8, 10-12 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on 03 February 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's cancellation claim 9 is acknowledged and has been entered into the record.

Drawings

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on February 03, 2003 have been approved.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 25, 28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Chow *et al* (USP 5,989,402).

Chow *et al* teach a micro-fluidic separation system comprising replaceable separation units 14. The separation units having inlets and outlets, and micro-fluidic channel. Chow *et al* disclose that the separation units can must include at least one micro-scale channel, but the configuration of the channels can exist in a number of formats (column 5, lines 3-27). Therefore Chow *et al* do teach the use of separation units of with channels of different configurations, i.e. different lengths. The system comprising a single reservoir unit having a plurality of reservoirs 24 containing a liquid and an external power unit coupled to a plurality of probes 204 which are capable of generating an electric difference between the probes for electrokinetically driving fluid from the reservoir to the micro-channel of the separation device. Additionally, the system

Art Unit: 1743

comprising a support plate 206. The system further comprising a membrane or gasket placed on the surface of the reservoir unit (column 11, lines 15-20).

Response to Arguments

5. Applicant's arguments filed February 03, 2003 have been fully considered but they are not persuasive. Examiner called Applicant's representative on April 14, 2003 to discuss the instant application, no reply from Applicant's representative was received. Therefore, upon reconsideration of the reference Chow *et al* (USP 5,989,402), Examiner believes Chow *et al* anticipates the instant claims. In the Response, filed August 26, 2002, Applicant argues that Chow *et al* do not teach separation units with micro-channels of different lengths. Examiner does not agree since Chow *et al* do disclose the invention being used with different micro-fluidic device which have different channel configurations, i.e. different lengths (column 5, lines 20-25). Moreover, Chow *et al* disclose the use of adapter plates for interfacing with differently sized or differently configured micro-fluidic devices (column 10, lines 25-34). Examiner contends that different substrates comprising a channel network are going to produce inherently different lengths since no two substrates are manufactured in exactly and precisely the same way. For example, common manufacturing tolerances of channel formation via laser ablation on a substrate will never produce two substrates of "exactly" the same length, depth, etc. Therefore, the Chow *et al* do disclose the invention being used with different micro-fluidic device that have different lengths.

Allowable Subject Matter

6. Claims 2, 4-8, 10-12 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or fairly suggest a modular microchannel apparatus for the chemical analysis of an analyte in a sample comprising the limitations of claim 1 in addition to at least one of the separation units being chip-shaped and formed from a first and second half, having a substantially planar surface facing and joining the other half, wherein at least one of the planar surfaces has a channel thereon such that the joining of the two surfaces forms the microchannel.

Conclusion

8. Claims 1, 3, 25, 28 and 30 are rejected. Claims 2, 4-8, 10-12 and 26 are objected to.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697. The examiner can normally be reached on Mondays-Thursdays, alternate Fridays from 6:00 am to 3:30 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 308-4037.

The fax number for the organization where this application or proceeding is assigned is (703) 872-9310 for official papers prior to mailing of a Final Office Action. For after-Final Office Actions use (703) 872-9311. For unofficial or draft papers use fax number (703) 305-7719. Please label all faxes as official or unofficial. The above fax numbers will allow the paper to be forwarded to the examiner in a timely manner.

Art Unit: 1743

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Kathryn Bex

P. Kathryn Bex
Patent Examiner
AU 1743
April 16, 2003

Jill Warden

Supervisory Patent Examiner
Technology Center 1700